

CLAIMS

What is claimed is:

1. An automatic fuel cleaner apparatus for cleaning either a diesel or a gasoline fuel system, said system having a fuel line inlet and a fuel line outlet, said apparatus comprising:

a diesel service portion including:

a diesel return hose having a first end and a second end, wherein said first end of said diesel return hose is capable of being coupled to said fuel line outlet;

10 a diesel detergent reservoir having an input and an output, wherein said input of said diesel detergent reservoir is connected to said second end of said diesel return hose;

a diesel pump having a diesel pump output and a diesel pump input, said diesel pump input connected to said output of said diesel detergent reservoir;

15 a diesel output hose having a first end and a second end, wherein said first end of said diesel output hose is connected to said diesel pump output and said second end of said diesel output hose is capable of being coupled to said fuel line inlet;

a gasoline service portion including:

a gasoline return hose having a first end and a second end, wherein said first end of said gasoline return hose is capable of being coupled to said fuel line outlet;

20 a gasoline detergent reservoir having an input and an output, wherein said input of said gasoline detergent reservoir is connected to said second end of said gasoline return hose;

a gasoline pump having a gasoline pump output and a gasoline pump input, said gasoline pump input connected to said output of said gasoline detergent reservoir;

and

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a gasoline output hose having a first end and a second end, wherein said first end of said gasoline output hose is connected to said gasoline pump output and said second end of said gasoline output hose is capable of being coupled to said fuel line inlet.

5        2.     The automatic fuel cleaner apparatus of claim 1, wherein said diesel pump input is connected to said output of said diesel detergent reservoir via a diesel filter, and wherein said gasoline pump input is connected to said output of said gasoline detergent reservoir via a gasoline filter.

10      3.     The automatic fuel cleaner apparatus of claim 1, wherein said first end of said diesel output hose is connected to said diesel pump output via a diesel relief valve.

4.     The automatic fuel cleaner apparatus of claim 1, wherein said first end of said gasoline output hose is connected to said gasoline pump output via a gasoline pressure regulator.

15      5.     The automatic fuel cleaner apparatus of claim 1, wherein said diesel service portion further includes a diesel solenoid, and wherein said gasoline service portion further includes a gasoline solenoid.

20      6.     The automatic fuel cleaner apparatus of claim 1, wherein said diesel service portion further includes a diesel pressure gauge for displaying an output pressure of said diesel output hose, and wherein said gasoline service portion further includes a gasoline pressure gauge for displaying an output pressure of said gasoline output hose.

7.     A method of cleaning a fuel system, said system having a fuel, a fuel line inlet and a fuel line outlet, said method comprising the steps of:

coupling a first end of a return hose to said fuel line outlet, said return hose having a second end connected to a detergent reservoir, said detergent reservoir connected to

an input of a pump having an output;

coupling a first end of an output hose to said fuel line inlet, said output hose having a second end connected to said output of said pump;

setting a timer for activating said pump for a pre-determined period of time;

5       adjusting a pressure regulator to regulate a fluid pressure of said output of said pump;

activating said pump;

cleaning said fuel;

stopping said pump when said timer is about to expire;

10      readjusting said pressure regulator to release residual pressure; and

decoupling said return and output hoses.

8.       The method of claim 7 further comprising the step of monitoring said fluid pressure using a pressure gauge connected to said output of said pump.

9.       The method of claim 7, wherein a solenoid is used for activating said cleaning 15 step.

10.      The method of claim 7, wherein said cleaning step further includes the step of: directing said fuel from said return hose into a detergent reservoir, including a detergent;

mixing said fuel with said detergent to create a mixture;

20      passing said mixture through a filter; and

outputting said mixture to said output hose.

11.      An automatic fuel cleaner apparatus for cleaning a fuel system, said system having a fuel line inlet and a fuel line outlet, said apparatus comprising:

*Subg1* a return hose having a first end and a second end, wherein said first end of said

return hose is capable of being coupled to said fuel line outlet;

a detergent reservoir having an input and an output, wherein said input of said detergent reservoir is connected to said second end of said return hose;

a pump having a pump output and a pump input, said pump input connected to said output of said detergent reservoir;

a multi-port fuel block connected to said pump output and a solenoid; and

an output hose having a first end and a second end, wherein said first end of said output hose is connected to said multi-port fuel block and said second end of said output hose is capable of being coupled to said fuel line inlet;

10 wherein said solenoid is capable of connecting said pump output to said first end of said output hose.

12. The automatic fuel cleaner apparatus of claim 11, wherein said multi-port fuel block is connected to said pump output via a pressure regulator.

13. The automatic fuel cleaner apparatus of claim 11, wherein said multi-port fuel block is connected to said pump output via a relief valve.

14. The automatic fuel cleaner apparatus of claim 11, wherein said multi-port fuel block is further connected to a pressure gauge.

15. The automatic fuel cleaner apparatus of claim 14, wherein said solenoid causes said pressure gauge to be connected to said pump output.